

## **DETAILED ACTION**

### ***Status of Claims***

1. Responsive to the amendment filed 14 March 2008, claim 1 is amended, and claims 22 and 40 are cancelled. Claims 1, 3, 4, 6-17, 19-21, 23, 25-26, 29, 36, 38, 39 and 41 are currently under examination.
2. The Examiner notes that although claim 24 is listed as active by Applicant in the remarks of 14 March 2008, claim 24 was previously cancelled by the amendment filed 2 October 2006.

### ***Status of Previous Rejections***

3. The amendment to independent claim 1 requires new grounds for rejection, stated below.

### ***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1, 7, 19, 20, 26, 29, 38, 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '901 in view of U.S. Patent 6,664,018 issued to Chen et al. (hereinafter "Chen")..

Regarding claim 1, JP '901 teaches the invention substantially as claimed. JP '901 discloses a method of preparing a green compact by coating a die with lubricant

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(see claim 1). JP '901 also teaches that the lubricant is selected from a list comprising zinc stearate lubricants, made by dispersing a solid lubricant in a solvent (see paragraph [0016], for example). JP '901 further discloses wherein this coating may be accomplished by means of spray coating (see paragraph [0016]). The claimed limitation of the lubricant being applied uniformly onto the inner surface of the die is not specifically disclosed, but would be inherent in the prior art process of spray coating (see MPEP §2112). JP '901 further teaches that the die is heated to 150-400 °C (see paragraph [0017]). JP '901 teaches filling a raw material powder whose major component is an active metallic element into the die (see paragraphs [0008-0009], for example). JP '901 teaches compacting the raw material by warm pressurizing to make a green compact (see paragraph [0008], for example). The examiner notes that the process step of ejecting the green compact from the die is inherent in the process for compacting a green compact (see MPEP §2112.01). JP '901 teaches wherein the green compact has high density (see paragraph [0006], for example), and wherein the active metallic element is aluminum (see paragraph [0009], for example). JP '901 does not disclose wherein a new metallic soap film comprising the active metallic element is formed on a surface of the green compact, however, this property would be inherent in the process disclosed in JP '901 (see MPEP §2112). JP '901 teaches wherein the lubricant is a higher-fatty acid salt of zinc, such as zinc stearate (see [0016]).

JP '901 does not teach wherein the dispersion comprises a surfactant which is different from the lubricant. However, it is well known in the art of dispersion that surfactants are commonly added to improve the stability.

For example, Chen teaches a method for forming a dispersion of zinc stearate in water (see Abstract, cols. 2-3). Chen teaches that prior art methods of mixing zinc stearate with a surfactant and water do not yield dispersions with long-term stability (see cols. 1). Chen teaches that the dispersion comprises a surfactant (see cols. 3-7). Chen teaches that the particles of zinc stearate in the dispersion are submicron (see col. 3), meeting the limitation of being powdery.

It would have been obvious to one of ordinary skill in the art at time of invention to have practiced the invention of JP '901, and to have replaced the zinc stearate dispersion with the zinc stearate dispersion made by the method of Chen, because Chen teaches that the method can create a very stable dispersion while using less energy (see cols. 3-4).

Regarding claim 7, JP '901 is applied to the reference as stated above in the rejection of claim 1.

Regarding claim 19, JP '901 teaches a dispersion based on water or alcohol (see paragraph [0016]).

Regarding claim 20, JP '901 does not teach a dispersion of water mixed with an alcohol-based solvent in an amount of from 1 to 50% by volume. However, JP '901 does teach that either water or alcohol may be used for the same utility. It would have been obvious to one of ordinary skill in the art at time invention was made to mix the two solvents with identical utility, to create a solvent with the same utility (see MPEP §2144.06)

Regarding claim 26, the claimed properties not disclosed in the prior art process would be inherent in that process (see MPEP §2112).

Regarding claim 29, JP '901 is applied to the claim as stated above. JP '901 further teaches sintering of the green body (see paragraph [0026]).

Regarding claim 38, JP '901 is applied to the claim as stated above in the rejection of claim 1. The claimed limitation of the soap film formed being uniform is not specifically disclosed, but would be inherent in the prior art process (see MPEP §2112).

Regarding claim 39, JP '901 teaches to use zinc stearate (see paragraph [0016], for example).

Regarding claim 41, Chen teaches that the surfactant may be selected from a list including anionic surfactants such as polyoxyethylene nonylphenyl ether (see col. 4).

6. Claims 14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '901 in view of Chen as applied to claim 1 above, and further in view of Kondo '760.

Regarding claim 14, JP '901 is applied to the claim as stated above. JP '901 is silent with regard to an ejection pressure of 10 MPa or less when the compacting pressure is 784 MPa or more.

Kondo '760 teaches a process for compacting a green compact comprising spraying a powdery higher fatty acid-based lubricant which is dispersed in a dispersion comprising a surfactant onto an inner surface of a die, which is heated (see claim 1, and figure 1, for example); filling a raw material powder whose major component is an active

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metallic element into the die (see claim 1); compacting the raw material powder by warm pressurizing to make a green compact (see claim 1); and ejecting the green compact from the die (see abstract, for example); whereby the resulting green compact has a high density (see abstract).

Kondo '760 teaches that ejection pressure is 10 MPa or less when the compacting pressure is 784 MPa or more (see figure 4). Kondo '760 further teaches that the ratio of ejecting pressure with respect to compacting pressure shows a decreasing trend with increasing compacting pressure (see col. 20, lines 15-53, for example).

It would have been obvious to one of ordinary skill in the art at time invention was made to use the high pressures taught by Kondo '760 (cited above) in the process of JP '901, in order to improve density in the green compact and decrease the ejection force, as taught by Kondo '760 (cited above).

Regarding claim 16, JP '901 is applied to the claim as stated above. As stated above, it would have been obvious to one of ordinary skill in the art to use 392 MPa compacting pressure or more as taught by Kondo '760 in the process of JP '901, in order to improve density in the green compact and decrease the ejection force, as taught by Kondo '760 (cited above). The properties not disclosed in the prior art of ejecting pressure being less than 5 MPa would be inherent in the process (see MPEP§2112.01).

Regarding claim 17, JP '901 is applied to the claim as stated above. Kondo '760 teaches that the ratio of ejecting pressure with respect to compacting pressure shows a

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decreasing trend with increasing compacting pressure (see col. 20, lines 15-53, for example).

7. Claims 3, 6, 10, 11, 13, 17 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '901 in view Chen as applied to claim 1 above, further in view of Kobayashi.

Regarding claim 3 and claim 6, JP '901 is applied to the claim as stated above. JP '901 does not disclose any specific alloying elements to be added to the raw material powder.

Kobayashi teaches a process for manufacturing sintered compacts of aluminum-base alloys in which the inside surface of the die is coated by a lubricant (see col. 4, line 63-col. 5, line 6). Kobayashi further teaches that the alloys may be made from alloy powders comprising silicon, copper, and magnesium (see col. 3, line 10-col. 4, line 62). It would have been obvious to one of ordinary skill in the art at time of invention to use the raw material powder comprising silicon, taught by Kobayashi, cited above, in order to obtain an alloy with age hardening effects, as taught by Kobayashi (see col. 2, lines 5-23).

Regarding claim 10, JP '901 is applied to the claim as stated above. JP '901 does not teach apparent green density of the compact is 90% or more.

Kobayashi further discloses that the green density of the compact made from aluminum, silicon, copper, and magnesium is preferably 90-99% (see col. 5, lines 7-18).

Regarding claim 11, JP '901 is applied to the claim as stated above. JP '901 does not disclose any specific compacting pressure for aluminum of 392 MPa or more.

Kobayashi teaches that the compaction is performed at pressures of 3-4 ton/cm<sup>2</sup>, said pressure range overlapping the claimed range and thus establishing a *prima facie* case of obviousness for that range (see MPEP §2144.05). It would have been obvious to one of ordinary skill to select any part of the disclosed prior art range as the reference cited teaches the same utility over the entire range.

Regarding claim 13, JP '901 is applied to the claim as stated above. JP '901 does not disclose compacting pressure of 392-2,500 MPa.

Kobayashi teaches that the compaction is performed at pressures of 3-4 ton/cm<sup>2</sup>, said pressure range overlapping the claimed range and thus establishing a *prima facie* case of obviousness for that range (see MPEP §2144.05). It would have been obvious to one of ordinary skill to select any part of the disclosed prior art range as the reference cited teaches the same utility over the entire range.

Regarding claim 17, neither JP '901 nor Kobayashi disclose wherein the ejection force with respect to the compacting pressure shows a decreasing tendency when the compacting pressure increases. However, the ejection force of the pellet would be an inherent property in the process (see MPEP §2112).

Regarding claim 36, JP '901 is applied to the claim as stated in the rejection of claim 1 above. JP '901 does not teach wherein the apparent density of the green compact is 90% or more. Kobayashi further discloses that the green density of the

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compact made from aluminum, silicon, copper, and magnesium is preferably 90-99% (see col. 5, lines 7-18).

8. Claims 1, 3, 4, 6, 7, 17, 19, 29, and 38, 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '206 in view of Chen and JP '901.

Regarding claim 1, JP'206 discloses the invention substantially as claimed. JP '206 teaches a process for compacting a green compact comprising coating a solution of Zn stearate onto a die, filling a raw material powder whose major component is Ti into the die, compacting the material powder to make a green compact (see abstract). JP '206 teaches wherein the lubricant is zinc stearate (see Abstract), meeting the limitations of a metallic salt whose major component is at least one member selected from the group of zinc salts of higher fatty acids. JP '206 does not disclose ejecting the green compact from the die, wherein the lubricant is sprayed, wherein the die is heated, wherein the raw material is compacted by warm pressurizing, or wherein a new metallic soap film is formed on the green surface of the compact. Ejecting the green compact from the die is well known in the art as an integral part of a process for compacting a green compact, and it would have been obvious to one of ordinary skill in the art to eject the green compact from the die, in order to proceed with a sintering procedure, for example. The claimed limitation of the lubricant being applied uniformly onto the inner surface of the die is not specifically disclosed, but would be inherent in the prior art process of spray coating (see MPEP §2112).



JP '901 discloses a method of preparing a green compact by coating a die with lubricant (see claim 1). JP '901 also teaches that the lubricant is selected from a list comprising zinc stearate lubricants, made by dispersing a solid lubricant in a solvent (see paragraph [0016], for example). JP '901 further discloses wherein this coating may be accomplished by means of spray coating (see paragraph [0016]). JP '901 further teaches that the die is heated to 150-400 °C (see paragraph [0017]). JP '901 teaches filling a raw material powder whose major component is an active metallic element into the die (see paragraphs [0008-0009], for example). JP '901 teaches compacting the raw material by warm pressurizing to make a green compact (see paragraph [0008], for example). The examiner notes that the process step of ejecting the green compact from the die is inherent in the process for compacting a green compact (see MPEP §2112). JP '901 teaches wherein the green compact has high density (see paragraph [0006], for example), and wherein the active metallic element is aluminum (see paragraph [0009], for example). JP '901 does not disclose wherein a new metallic soap film comprising the active metallic element is formed on a surface of the green compact, however, this property would be inherent in the process disclosed in JP '901 (see MPEP §2112).

It would have been obvious to use the compaction process comprising warm pressurizing disclosed in JP '901 in the invention of JP '206 in order to improve the density and green strength of the green compact, as taught by JP '901 (see paragraph [0006]).

JP '901 does not teach wherein the dispersion comprises a surfactant which is different from the lubricant. However, it is well known in the art of dispersion that surfactants are commonly added to improve the stability.

For example, Chen teaches a method for forming a dispersion of zinc stearate in water (see Abstract, cols. 2-3). Chen teaches that prior art methods of mixing zinc stearate with a surfactant and water do not yield dispersions with long-term stability (see cols. 1). Chen teaches that the dispersion comprises a surfactant (see cols. 3-7). Chen teaches that the particles of zinc stearate in the dispersion are submicron (see col. 3), meeting the limitation of being powdery.

It would have been obvious to one of ordinary skill in the art at time of invention to have practiced the invention of JP '901, and to have replaced the zinc stearate dispersion with the zinc stearate dispersion made by the method of Chen, because Chen teaches that the method can create a very stable dispersion while using less energy (see cols. 3-4).

Regarding claim 3, JP '206 teaches that the raw material powder comprises iron (see abstract).

Regarding claim 4, JP '206 teaches wherein the raw material powder is Ti powder (see abstract).

Regarding claim 6, JP '206 further teaches wherein the raw material powder comprises iron (see abstract).

Regarding claim 7, JP '206 teaches wherein the raw powder comprises Al powder (see abstract).

Regarding claim 17, neither JP '206 nor JP '901 disclose wherein the ejection force with respect to the compacting pressure shows a decreasing tendency when the compacting pressure increases. However, the ejection force of the pellet would be an inherent property in the process (see MPEP §2112).

Regarding claim 19, JP '206 does not teach wherein the solvent is selected from the group consisting of water and alcohol based solvents. JP '901 teaches a dispersion based on water or alcohol (see paragraph [0016]).

Regarding claim 29, JP '206 is applied to the claim as stated above. JP '901 further teaches sintering of the green body (see paragraph [0026]).

Regarding claim 38, JP '206 and JP '901 are applied to the claim as stated above in the rejection of claim 1. The claimed limitation of the soap film formed being uniform is not specifically disclosed, but would be inherent in the prior art process (see MPEP §2112).

Regarding claim 39, JP '206 teaches to use Zn stearate (see Abstract). JP '901 teaches to use zinc stearate (see paragraph [0016], for example).

Regarding claim 41, Chen teaches that the surfactant may be selected from a list including anionic surfactants such as polyoxyethylene nonylphenyl ether (see col. 4).

9. Claims 1, 3, 4, 6, 7, 8, 9, 11, 12, 14, 15, 17, 19, 21, 23, 25, 29, and 38, 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo '760, in view of U.S. Patent 6,551,371 issued to Furuta et al. (hereinafter "Furuta").

Regarding claim 1, Kondo '760 teaches a process for compacting a green compact comprising spraying a powdery higher fatty acid-based lubricant which is dispersed in a dispersion comprising a surfactant onto an inner surface of a die, which is heated (see claim 1, and figure 1, for example); filling a raw material powder whose major component is an active metallic element into the die (see claim 1); compacting the raw material powder by warm pressurizing to make a green compact (see claim 1); and ejecting the green compact from the die (see abstract, for example); whereby the resulting green compact has a high density (see abstract).

Kondo '760 further teaches that a new metallic soap film being different from the higher fatty acid-based lubricant and comprising the active metallic element is formed on a surface of the green compact (see claim 1). Kondo '760 teaches that the lubricant is applied to the die uniformly (see fig. 3, for example). Kondo '760 teaches wherein the lubricant is zinc stearate (see Abstract), meeting the limitations of a metallic salt whose major component is at least one member selected from the group of zinc salts of higher fatty acids.

Kondo does not disclose wherein the active metallic element is titanium or aluminum.

Furuta teaches that titanium based composites may be prepared by powder metallurgy in the same field of endeavor (see abstract). Furuta further teaches that the

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materials may be formed by using die compaction (see col. 14, lines 13-19). It would have been obvious to one of ordinary skill in the art at time the invention was made to use the powder composition disclosed in Furuta (see col. 12, line 23-col. 14, line 12, for example), in order to make a composite suitable for application to a valve in an automobile engine, as taught by Furuta (see "Background Art").

Regarding claim 3, Furuta further teaches that the raw material powder comprises aluminum (see abstract).

Regarding claim 4, Furuta further teaches that the raw material powder comprises titanium alloy (see abstract).

Regarding claim 6, Furuta further teaches that the raw material powder comprises silicon (see abstract).

Regarding claim 7, Furuta further teaches that the raw material powder comprises compounds of aluminum (see abstract).

Regarding claim 8, Furuta further teaches that the raw material powder can comprise borides (see col. 13, lines 9-63).

Regarding claim 9, Furuta teaches that the green density of the compact is desirably

Regarding claim 11, Kondo '760 teaches that the die should be heated from 100 °C or more (see claim 5), said temperature range overlapping the range claimed by applicant, establishing a *prima facie* case of obviousness for that range (see MPEP §2144.05). It would have been obvious to one of ordinary skill to select any part of the disclosed prior art range as the reference cited teaches the same utility over the entire

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range of 100-225 °C. Kondo '760 teaches that the die is heated to a temperature of at least 100 °C, (see claim 5), and the powder compacted at a high pressure in order to decrease the ejection force (see col. 2, lines 15-31), and that pressure is selected in order to force a higher fatty acid-based lubricant to bond with the metal powder (see col. 8, lines 28-43, for example). It would have been obvious to one of ordinary skill in the art at time of invention choose a compaction pressure over 392 MPa in order to cause a metallic soap film to form on the compact and reduce ejection force.

Regarding claim 12, Kondo '760 teaches that the die should be heated from 100 °C or more (see claim 5), said temperature range overlapping the range claimed by applicant, establishing a *prima facie* case of obviousness for that range (see MPEP §2144.05). It would have been obvious to one of ordinary skill to select any part of the disclosed prior art range as the reference cited teaches the same utility over the entire range of 100-225 °C. Kondo '760 teaches that the die is heated to a temperature of at least 100 °C, (see claim 5), and the powder compacted at a high pressure in order to decrease the ejection force (see col. 2, lines 15-31), and that pressure is selected in order to force a higher fatty acid-based lubricant to bond with the metal powder (see col. 8, lines 28-43, for example). It would have been obvious to one of ordinary skill in the art at time of invention choose a compaction pressure from 500-2500 MPa in order to cause a metallic soap film to form on the compact and reduce ejection force.

Regarding claim 14, Kondo '760 teaches that ejection pressure is 10 MPa or less when the compacting pressure is 784 MPa or more (see figure 4).

Regarding claim 15, Kondo '760 teaches that ejection pressure is 10 MPa or less when the compacting pressure is 784 MPa or more (see figure 4).

Regarding claim 17, Kondo teaches that the ratio of ejecting pressure with respect to compacting pressure shows a decreasing trend with increasing compacting pressure (see fig. 4).

Regarding claim 19, Kondo '760 teaches to use water as the solvent in the dispersion (see col. 5, line 5-col. 6, line 66).

Regarding claim 21, Kondo '760 teaches to heat to at least 100 °C, the boiling point of said water, and further teaches that it is preferable to heat to less than the melting temperature of the lubricant (see col. 7, lines 20-33).

Regarding claim 23, Kondo '760 teaches that the lubricant has particle diameter of 30  $\mu\text{m}$  or less (see col. 5, lines 10-27).

Regarding claim 25, Kondo '760 teaches that the metal powder forms a metallic soap film (see col. 4, line 33-col. 5, line 4).

Regarding claim 29, the references are applied to the claims as stated in the rejection of claim 1.

Regarding claim 38, Kondo '760 teaches that the new metallic soap film is uniform (see col. 7, lines 7-19, for example).

Regarding claim 39, Kondo '760 teaches that the lubricant is zinc stearate (see cols. 2-3, for example).

Regarding claim 41, Kondo '760 teaches that the surfactant may be a polyoxyethylene nonylphenyl ether (EO) 6 or a polyoxyethylene nonylphenyl ether (EO) 10 (see col. 5).

### ***Response to Arguments***

10. Applicant's arguments filed 14 March 2008 have been fully considered but they are not persuasive.

Applicant argues that the amendment to claim 1 overcomes the previous rejections based on JP '206 or Kondo '760. New grounds for rejection based on these references are presented above.

In response to applicant's argument that JP '901 and Chen are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the Examiner acknowledges that Chen is not directed to the field of powder metallurgy. However, JP '901 explicitly teaches to make a dispersion of a fatty acid (as cited in the rejection above). Thus, one of ordinary skill in the art would have looked to art in the field of dispersions when practicing or seeking to improve on the method of JP '901.



Applicant has stated that there would be no expectation of success if the teachings of Chen were combined with those of JP '901. The Examiner disagrees with this argument. JP '901 teaches to use a dispersion of a stearate. Chen teaches a method of making a more stable dispersion of stearate using less energy (as cited above). Thus one of ordinary skill in the art would expect the stearate dispersion of Chen to be superior to prior art stearate dispersions.

Applicant argues that JP '901 fails to disclose the use of a separate fatty acid based lubricant and surfactant. The Examiner agrees, as was stated in the rejection above. The Examiner never stated that JP '901 teaches the use of a surfactant that is different from the stearate disclosed.

Applicant cites the specification in an attempt to show unexpected results over the teachings of JP '901. Any showing of unexpected results should compare the instant invention with the closest prior art in a timely filed declaration or affidavit as required by 37 CFR 1.132. The mere statement that prior art methods are inferior is insufficient to rebut the prima facie case of obviousness, absent a showing that the invention yields unexpected results when compared with the closest prior art.

Applicant has stated in the remarks of 14 March 2008 at page 20,

In JP '901, even if there is the possibility that a metal soap is generated, **it is merely a very small portion between the surface of the formed body and the die, BUT NOT A FILM as claimed.** This is because, in the metal lubrication method of JP '901, higher fatty acid-based lubricants (zinc stearate in JP '901) are adhered to the inner surface of the die merely in a dotted manner, and additionally, the lubricants are **peeled off** when the metal powder is filled in the die. Thus a uniform lubricant film is not formed which is necessary for generating a metal soap film.

(emphasis in original). This statement is not persuasive. JP '901 simply does not teach that the lubricant is adhered to the inner surface of the die in a dotted manner, or that the lubricant is peeled off at any time. If applicant wishes to show actual results of the prior art method of JP '901, said results should be submitted in the form of a timely filed declaration under 37 CFR 1.132 and not as argument. Further, even if the dispersion of JP '901 were poorly dispersed, and thereby would show the poor results as stated by applicant, the pending rejection of claim 1 is not based on JP '901, but rather based on the teachings of JP '901 when combined with the teachings of Chen.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant has stated that there would be no reasonable expectation of success when combining the teachings of JP '901 with those of US '760 (Kondo '760). The examiner disagrees. One of ordinary skill in the art of powder metallurgy would expect that a powder metallurgy process which works for compaction of iron powders would have a reasonable expectation of success when used with powders of Ti or Al. It is well established in the art to use die compaction for Iron, Ti and Al powders, as well as many other types of metal powder. Further, Applicant is incorrect. JP '901 explicitly states that Al powder might be used in the invention (see [0009]).

11. The declaration of Mikio Kondoh under 37 CFR 1.132 filed 14 March 2008 is insufficient to overcome the rejection of claims based upon JP '901 as set forth in the last Office action because: this declaration does not rebut the prima facie case of obviousness.

An affidavit or declaration under 37 CFR 1.132 must compare the claimed subject matter with the closest prior art to be effective to rebut a prima facie case of obviousness. *In re Burckel*, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979). "A comparison of the claimed invention with the disclosure of each cited reference to determine the number of claim limitations in common with each reference, bearing in mind the relative importance of particular limitations, will usually yield the closest single prior art reference." *In re Merchant*, 575 F.2d 865, 868, 197 USPQ 785, 787 (CCPA 1978) (emphasis in original). Where the comparison is not identical with the reference disclosure, deviations therefrom should be explained, *In re Finley*, 174 F.2d 130, 81 USPQ 383 (CCPA 1949), and if not explained should be noted and evaluated, and if significant, explanation should be required. *In re Armstrong*, 280 F.2d 132, 126 USPQ 281 (CCPA 1960) (deviations from example were inconsequential).

In the instant case, the process used to generate comparison data is not the same as that used in JP '901, and there is no explanation of the differences between the comparison method and the method of JP '901. While Applicant has certainly shown that the results from the instantly claimed process are better than some other processes, there is no showing that the claimed process yields unexpected results over the closest prior art references JP '901 and Kondo '760.

12. The declaration under 37 CFR 1.132 filed 20 March 2008 is insufficient to overcome the rejection of claims based upon JP '901 as set forth in the last Office action because: this declaration does not rebut the prima facie case of obviousness.

The declaration filed 20 March 2008 appears to be the same declaration of 14 March 2008, with typographical errors corrected. The declaration filed 20 March 2008 is insufficient for the same reasons stated above regarding the declaration of 14 March 2008.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER KESSLER whose telephone number is (571)272-6510. The examiner can normally be reached on Mon-Fri, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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